AMENDMENTS TO THE CLAIMS

Claim 1 (amended): A substantially pure O-Superfamily conopeptide comprising the amino acid sequence Xaa1-Cys-Ile-Xaa4-Ser-Gly-Asp-Leu-Cys-Phe-Arg-Ser-Asp-His-Ile-Gly-Cys-Cys-Ser-Gly-Lys-Cys-Ala-Phe-Val-Cys-Leu (SEQ ID NO:271), wherein Xaa1 is Trp or bromo-Trp and Xaa4 is Pro or hydroxy-Pro ~~selected from the peptides set forth in Table 2~~.

Claims 2-4 (canceled)

Claim 5 (amended). The substantially pure O-Superfamily conopeptide ~~conotoxin peptide~~ of claim 1 ~~2~~, wherein Xaa1 ~~Xaa$_1$~~ is Trp.

Claim 6 (canceled)

Claim 7 (amended). The substantially pure O-Superfamily conopeptide ~~conotoxin peptide~~ of claim 1 ~~2~~, wherein Xaa4 ~~Xaa$_3$~~ is Pro.

Claim 8 (amended). The substantially pure O-Superfamily conopeptide ~~conotoxin peptide~~ of claim 1 ~~2~~, wherein Xaa4 ~~Xaa$_3$~~ is hydroxy-Pro.

Claim 9 (canceled)

Claim 10 (amended). The substantially pure O-Superfamily conopeptide ~~conotoxin peptide~~ of claim 1 ~~2~~, wherein Xaa1 ~~Xaa$_1$~~ is 6-bromo-Trp.

Claims 11-14 (canceled)

Claim 15 (amended): A substantially pure conotoxin precursor comprising an amino acid sequence Leu-Arg-Trp-Cys-Ile-Pro-Ser-Gly-Asp-Leu-Cys-Phe-Arg-Ser-Asp-His-Ile-Gly-Cys-Cys-Ser-Gly-Lys-Cys-Ala-Phe-Val-Cys-Leu (SEQ ID NO:270) ~~selected from the group consisting of amino acid sequences set forth in Table 1~~.

Claim 16 (amended): A pharmaceutical composition comprising a conotoxin peptide or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier, said conotoxin peptide being the O-Superfamily conopeptide ~~conotoxin peptide~~ of claim 1.

Claim 17 (amended): A pharmaceutical composition comprising a conotoxin peptide or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier, said conotoxin peptide being the O-Superfamily conopeptide ~~conotoxin peptide~~ of claim 39 ~~2~~.

Claim 18 (amended): A method for regulating the flow of sodium through sodium channels in an individual in need thereof which comprises administering a therapeutically effective amount of the O-Superfamily conopeptide ~~a conotoxin peptide~~ of claim 1 or a pharmaceutically acceptable ~~acceptible~~ salt thereof.

Claim 19 (amended): A method for treating or preventing disorders associated with voltage gated ion channel disorders in which comprises administering to a patient in need thereof a therapeutically effective amount of the O-Superfamily conopeptide ~~a conotoxin peptide~~ of claim 1 or a pharmaceutically acceptable ~~acceptible~~ salt thereof.

Claim 20 (amended): The method of claim 18, wherein said individual in need thereof suffers from a disorder selected from the group consisting of multiple sclerosis, a ~~other~~ demyelinating disease ~~diseases (such as acute disseminated encephalomyelitis, optic neuromyelitis, adrenoleukodystrophy, acute transverse myelitis, progressive multifocal leukoencephalopathy)~~, sub-

acute sclerosing panencephalomyelitis (SSPE), metachromatic leukodystrophy, Pelizaeus-Merzbacher disease, spinal cord injury, ~~botulinum toxin poisoning, Huntington's chorea,~~ a compression and entrapment neurophathy ~~neurophathies (such as carpal tunnel syndrome, ulnar nerve palsy)~~, and a cardiovascular disorder ~~disorders (such as cardiac arrhythmias, congestive heart failure), reactive gliosis, hyperglycemia, immunosuppression, cocaine addiction, cancer, cognitive dysfunction, disorders resulting from defects in neurotransmitter release (such as Eaton-Lambert syndrome), and reversal of the actions of curare and other neuromuscular blocking drugs~~.

Claim 21 (original): The method of claim 19, wherein said disorder is a neurologic disorder.

Claims 22-28 (canceled)

Claim 29 (original): The method of claim 19, wherein said disorder is a cardiovascular disorder.

Claims 30-38 (canceled)

Claim 39 (new): The substantially pure O-Superfamily conopeptide of claim 1, wherein Xaa1 is Trp and Xaa4 is Pro.

Claim 40 (new): A pharmaceutical composition comprising a conotoxin peptide or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier, said conotoxin peptide being the conotoxin protein precursor of claim 15.

Claim 41 (new): The method of claim 18, wherein the demyelinating disease is selected from the group consisting of acute disseminated encephalomyelitis, optic neuromyelitis, adrenoleukodystrophy, acute transverse myelitis and progressive multifocal leukoencephalopathy.

Claim 42 (new): The method of claim 18, wherein the compression and entrapment neurophathy is selected from the group consisting of carpal tunnel syndrome and ulnar nerve palsy.

Claim 43 (new): The method of claim 18, wherein the cardiovascular disorder is select4ed from the group consisting of cardiac arrhythmias and congestive heart failure.